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NASA CR 170548

(NASA-CR-170548) FGGE/ERBZ TAPE
SPECIFICATION AND SHIPPING LETTER
DESCRIPTION (Systems and Applied Sciences
Group.) 32 p HC A04/MF A01

N84-16073

USCL 05B

Unclass

63/82 11307

FGGE/ERBZ TAPE SPECIFICATION AND SHIPPING LETTER DESCRIPTION

MARCH 1983



National Aeronautics and
Space Administration

Goddard Space Flight Center
Greenbelt, Maryland 20771

FGGE/ERBZ TAPE SPECIFICATION
AND SHIPPING LETTER DESCRIPTION

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Contract No. NAS5-26753
SSD-T-8237-002-82

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FIGURE

Figure

I. Introduction

The FGGE/ERBZ tape contains 5 parameters which are extracted and reformatted from the Nimbus-7 ERB Zonal Means Tape in accordance with the FGGE Level II International Exchange Format Specification.

There are three types of files on a FGGE/ERBZ tape. The first file on the tape is a test file. The second file on the tape is a tape header file. The remaining one or more files are data files. A single end-of-file (EOF) tape mark will be written after each file and two EOF marks will be written after the last data file on the tape. All files are made up of one or more physical records. Each physical record contains 2960 bytes. Each physical record of the test file and the data files contains 80 logical records and each logical record contains 37 bytes. The tape header file has 29 physical records; each physical record contains 37 logical records. Each logical record contains 80 bytes. Each byte contains an EBCDIC coded character. One 1600 bpi magnetic tape contains one year of FGGE/ERBZ data. This tape is copied to one 800 bpi tape. The FGGE/ERBZ processing system has the following programs.

ERBZ-2C - converts the data to FGGE format

ERBZ-DP - tape check/document printout

COPY800 - copy FGGE tape to 800 bpi formatted tape

2. Data Set Production

2.1 General Description

The FGGE/ERBZ computer program converts selected terrestrial parameters (see Table XLIV in appendix A) retrieved from the Nimbus-7 ERB experiment into the FGGE level II format. There are three programs for this conversion. They are ERBZ-2C, ERBZ-DP, and COPY800.* In the following sections, these three programs are briefly described.

2.2 ERBZ-2C PROGRAM

2.2.1 General Description

The ERBZ-2C program determines the time span desired for the data, correlates this with the available data, and mounts the required ERB-ZONAL-MEANS tapes. The selected terrestrial parameters (see Table XLIV in Appendix A) are converted to the FGGE level II International Exchange Format, and are stored on an intermediate tape. When the end of the desired data is reached, the final output tapes are mounted. The program writes a test file and a tape-header file on the output tapes, and then copies the data files from the intermediate tape to the output tapes.

*ERBZ program generates 1600 bpi tape which will be sent to WDC-A. COPY800 copies a 1600 bpi tape to 800 bpi FGGE/ERBZ tapes which will be sent to WDC-B.

2.2.2 Data Flow Chart

ORIGINAL PAGE 19
OF POOR QUALITY

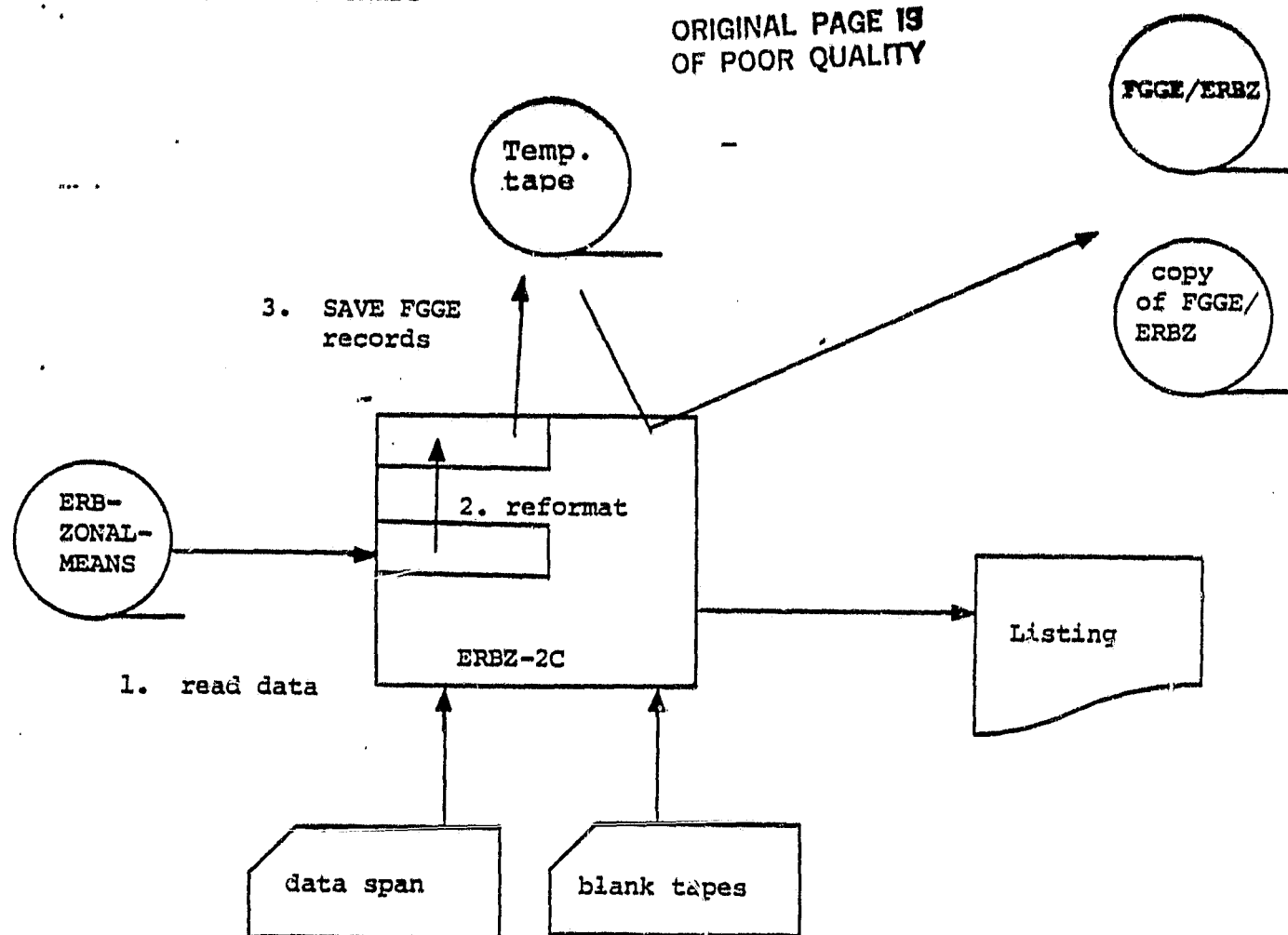


Fig. 2-1 FGGE/ERBZ-2C Data and Control Flow

2.2.3 I/O units List

| <u>Unit</u> | <u>Device</u> | <u>Lrecl/Blksize (Bytes)</u> |
|-------------|---------------|------------------------------|
| 5 | card reader | 80 |
| 6 | printer | |
| 10 | 9T/1600 bpi | 7812: ERB-ZONAL-MEANS Tape |
| 20 | 9T/1600 bpi | 37/2960: Temporary tape |
| 40 | 9T/1600 bpi | 37/2960: FGGE/ERBZ tape |
| 41 | Unit 40 | 80/2960: FGGE/ERBZ tape |
| 50 | disk | ZMT.CLIST(TABLE) |

2.3 ERBZ-DP PROGRAM

2.3.1 General Description

The ERBZ-DP program generates the shipping documentation and diagnostic information for the FGGE/ERBZ tapes. Statistics showing record counts and data element counts are compiled for comparison to the 2C printout.

2.3.2 Data Flow Chart

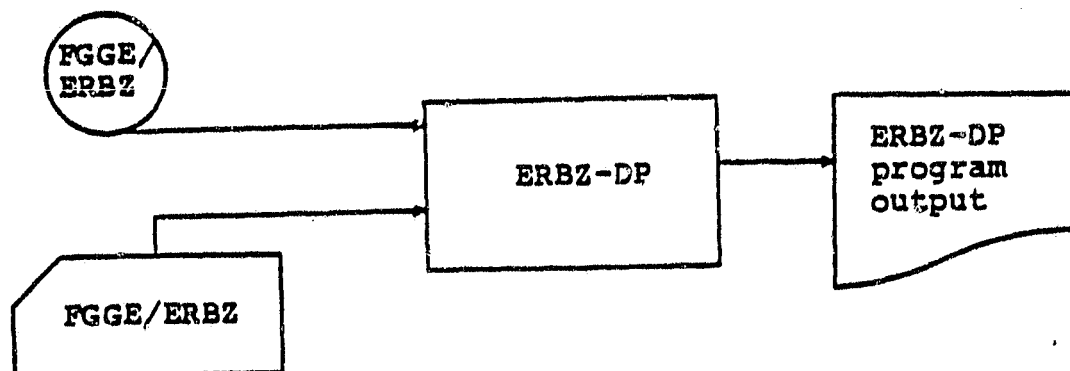


Fig. 2-2 FGGE/ERBZ-DP Data and Control Flow

2.3.3 I/O Units List

| <u>Unit</u> | <u>Device</u> | <u>Line/Blksize (Bytes)</u> |
|-------------|---------------|-----------------------------|
| 5 | card reader | 80 |
| 6 | printer | |
| 10 | 9T/1600 bpi | 80/2960 FGGE/ERBZ tape |
| 20 | Unit 10 | 37/2960 FGGE/ERBZ tape |

3. FGGE/ERBZ TAPE DESCRIPTION

3.1 TAPE SPECIFICATION

3.1.1 Physical Tape Characteristics

The physical characteristics of the FGGE/ERBZ tape are:

| | WDC-A | WDC-B |
|-------------------|----------|---------|
| Density: | 1600 bpi | 800 bpi |
| Mod of Recording: | PE | NRZI |
| Recording Code: | EBCDIC | EBCDIC |
| Number of Track: | 9 | 9 |
| Parity: | Odd | Odd |

3.1.2 Gross Format

The gross format of a FGGE/ERBZ tape is shown in Figure 3-1. It has three kinds of files on the tape. The first file on the tape is a test file, the second file on the tape is a tape header file, and the remaining one or more files are data files. Data files are grouped into month files. Each month files format is shown in Figure 3-2. The month files is explained in detail in section 3.2.3.

FGGE/ERBZ TAPE FORMAT

| |
|---------------------|
| TEST FILE |
| EOF |
| TAPE HEADER FILE |
| EOF |
| MONTH 1 FILES |
| EOF |
| MONTH 2 FILES |
| EOF |
| ○ ○ ○ ○ |
| MONTH N FILES |
| EOF |
| EOF |

Figure 3-1 Gross Format

| |
|--|
| FILE HEADER LOGICAL RECORD |
| REPORT IDENTIFICATION LOGICAL RECORD |
| PARAMETER 1, CHANNEL 1 DATA LOGICAL RECORDS |
| PARAMETER 1 CHANNEL 2 DATA LOGICAL RECORD |
| ○ ○ ○ ○ |
| EOF |
| |
| EOF |
| ○ ○ ○ |
| EOF |
| NEXT MONTH FILES |
| ○ ○ ○ |
| UNUSED TAPE |

PARAMETER 1,
CHANNELS 1 through 10

A

REPEAT (A) FOR
PARAMETERS 2
THROUGH 5

Figure 3-2 FORMAT OF MONTH FILES

3.2 File Specifications

There are three file types. The first file on the tape is the test file. The second file on the tape is the tape header file. The remaining files are the data files. Each of these file types is described in the following sections.

3.2.1 Test File

The test file is the first file on the tape. It contains 350 physical records on a 1600 BPI tape and 200 physical records on an 800 BPI tape. Each physical record contains 80 logical records. Each logical record contains 37 bytes. Each byte contains hexadecimal FF (Binary 11111111).

3.2.2 Tape Header File

The tape header file is the second file on the tape. It contains 29 physical records. Each physical record contains 37 logical records. Each logical record contains 80 bytes. Each byte contains an EBCDIC coded character.

The tape header file contains information about the data stored on the FGGE/ERBZ tape. The first fifteen logical records are shown in Figure 3-3. The contents of these fifteen logical records are stored exactly as depicted in Figure 3-3 with the exception of the underlined areas. The underlined areas designate variable fields which will change between FGGE/ERBZ tapes. The contents of each of these logical records are as follows:

LOGICAL RECORD CONTENTS

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|----|------------------|--------------------|-----------|-------------|-----------|-------------|----------|------------|
| 1 | FGGEbb4564YFMFbb | bbYLLMLbb | bb | bb | bb | bb | bb | bb |
| 2 | NAME:bb | bb | bb | bb | bb | bb | bb | bb |
| 3 | bb | bb | bb | bb | bb | bb | bb | bb |
| 4 | ADDRESS:bb | bb | bb | bb | bb | bb | bb | bb |
| 5 | bb | bb | bb | bb | bb | bb | bb | bb |
| 6 | bb | bb | bb | bb | bb | bb | bb | bb |
| 7 | SCIENTIST:GARYb | bb | bb | bb | bb | bb | bb | bb |
| 8 | DATE:bb | bb | bb | bb | bb | bb | bb | bb |
| 9 | 0123456789 | bb | bb | bb | bb | bb | bb | bb |
| 10 | TAPEb | CHARACTERISTICS:bb | 9b | TRACK,1600b | BP1,CO | DEb | EB | CDIC,MODEb |
| 11 | TAPEb | CONTENTS:bb | THISb | TAPEb | CONTAINSb | DAILYb | AVERAGEb | VALUESb |
| 12 | DERIVEDb | FROMb | THEb | ERb | bb | INSTRUMENTb | FLOWNb | ONb |
| 13 | THISb | TAPEb | CONFORMSb | WI | THb | THEb | FGGEb | LEVEL2b |
| 14 | AVAILABLEb | DATAb | FROMb | Yb | bb | MBb | bb | bb |
| 15 | bb | bb | bb | bb | bb | bb | bb | bb |

FIGURE 3-3. TAPE HEADER FILE - FIRST FIFTEEN LOGICAL RECORDS

Record 1: the first logical record contains the project title (FGGEbb), the producer code (4564), and the beginning and ending years and months contained on the tape.

Record 2: The second logical record contains the name of the producing office.

Record 3: The third logical record is filled with EBCDIC coded blanks.

Record 4-6: The fourth through the sixth logical records contain the address and country of the producing office.

Record 7: The seventh logical record contains the name of the scientist making the data available. This person is also the person to contact for more information about the data.

Record 8: The eighth logical record contains the date the tape was written. The date is variable data. The day name field (WWW) contains the first three characters of the day of the week (e.g., TUE). The month field (MMM) contains the first three characters of the name of the month (e.g., JAN). the day number field (DD) contains the numeric day within the month; its values range from 01 to 31. The year field (YYYY) contains four bytes which represent the year.

Record 9: The ninth logical record contains a translation table which will be stored exactly as shown in Figure 3-3.

Record 10: The tenth logical record contains information on the physical tape characteristics.

Record 11-15: The eleventh through the fifteenth logical records contain a description of the tape contents.

The sixteenth to the 1067th logical records are the tape header file containing a list of the tables of codes presented in Appendix 10, Appendix A of the FGGE International Data Management Plan. These tables are arranged in increasing numerical order. The codes within the tables are also arranged in increasing numerical order. The titles for the tables are stored in separate logical records surrounded by blank filled logical records. Each title record is followed by a sequence of logical records describing the table codes. The code value is stored in the first five bytes and the code description is stored in bytes seven through eighty of the next logical record.

The tables of codes are followed by seven logical records containing descriptions of the formats required to read the logical records comprising the reports on the tape. The contents of these logical records are shown in Figure 3-4. The field in the last record (numbered 1073) contains the following:

(N + 7): 3I3,I5,2I2,3I3,I5,2I2,1X

where N = 1067

LOGICAL RECORD CONTENTS

LOGICAL
RECORD
NUMBER:

N+1: LOGICAL RECORD FORMATS: bbbbbb
N+2: bbbbbb
N+3: bbbbbb IDENTIFICATION FORMAT: bbbbbb
N+4: bbbbbb 2I2, 17X, 6I2, I3
N+5: bbbbbb
N+6: bbbbbb ZONAL MEANS FORMAT: bbbbbb
N+7: bbbbbb 3I3, I5, 2I2, 3I3, I5, 2I2, bbbbbb

Note: Logical records 16 through N (where N = 1067) contain a list of the tables of codes in Appendix 10, Appendix A of the EGGE International Data Management Plan; N is the required number of logical records for EGGE tables of codes.

FIGURE 3-4. TAPE HEADER FILE-LOGICAL RECORDS DESCRIBING REPORT FORMATS

Following the format description, a sufficient number of blank-filled logical records are stored to complete the current physical record.

3.2.3 Data Files

The data files are grouped into month files. Each month files contains five (5) files. Each file contains one parameter data accumulated for one month. Parameter one through four have up to ten physical records each and each physical record contains data from the same channel. Parameter five has five or six physical records depending on the number of day of the month when ERB is turned on. Each physical record contains 80 logical records. Each logical record contains 37 bytes. Each byte contains an EBCDIC-coded character. There are several types of logical records in a data file as can be seen in Figure 3-2. Each of these logical record types is shown in Figure 3-5. As in the preceding figures, all underlined areas represent variable data fields,

3.2.3.1 File Header Logical Record

The first logical record of any data file is the file header logical record. This logical record contains information about the data in the file.

The first byte contains an EBCDIC coded H to indicate that this logical record is a file header.

The second and third bytes (FF) contain the data format indicator. This field indicates the format in which the data are stored. The values for Nimbus-7 data types are shown in Table 3-1.

The fourth through the seventh bytes (YYMM) contain the year and month of the data in the file. This time is expressed in the same way as in the first logical record of the tape header file. The fourteenth and fifteenth bytes (SS) contain the data source indicator. The values for Nimbus-7 data types are shown in Table 3-1.

The sixteenth through the thirty-third bytes are filled with EBCDIC-coded zeroes.

The thirty-fourth through the thirty-seventh bytes are filled with EBCDIC-coded blanks.

| PARAMETER NO. | DATA TYPE | SOURCE | FORMAT | TECHNIQUE |
|---------------|---|--------|--------|-----------|
| 1 | MEAN SOLAR IRRADIANCE | 52 | 05 | 05 |
| 2 | STANDARD DEVIATION OF SOLAR IRRADIANCE | 53 | 05 | 05 |
| 3 | RANGE (MAX-MIN) OF SOLAR IRRADIANCE | 54 | 05 | 05 |
| 4 | DELTA MEAN OF SOLAR IRRADIANCE | 55 | 05 | 05 |
| 5 | ZONALLY AVERAGED SOLAR INSOLATION | 56 | 05 | 05 |

TABLE 3-1. Data Source, Format and Processing Techniques Indicators

- (1) Refer TABLE XLIV in Appendix 10 Appendix A of "FGGE DATA MANAGEMENT PLAN".
- (2) Refer TABLE I in Appendix 10 Appendix A of "FGGE DATA MANAGEMENT PLAN".
- (3) Refer TABLE XXVII in Appendix 10 Appendix A of "FGGE DATA MANAGEMENT PLAN".
- (4) Refer TABLE XVI in Appendix 10 Appendix A of "FGGE DATA MANAGEMENT PLAN".

3.2.3.2 Report Identification Logical Record

The first byte contains an EBCDIC coded * to indicate that this logical record is a report identification logical record. The second and third bytes (SS) contain the data source indicator. This field has the same value as the fourteenth and fifteenth bytes of the file header logical record. The values for Nimbus-7 data types are shown in Table 3-1.

The fourth and fifth bytes (II) contain the data processing technique indicator. This field indicates how the data values were obtained. The data processing technique indicator codes for Nimbus-7 data types are shown in Table 3-1.

The sixth through the twenty-second bytes are filled with EBCDIC coded blanks.

The twenty-third and twenty-fourth bytes contain the instrument type indicator. This field will always contain an EBCDIC-coded 65 indicating that the instrument type is the Nimbus-7 ERB. The twenty-fifth through the twenty-eighth bytes (YMM) contain the time of the data contained in the report. This field will have the same value as bytes four through seven of the file header record for the file containing the report. The format for this time is the same as in the file header logical record. The thirty-fifth through the thirty-seventh bytes (NNN) contain the number of logical records in the report including the

report identification logical record. This number can range from 002 to 999. Table V-A in appendix shows the format of the report identification logical record.

3.2.3.3 Data Logical Record

Following the report identification logical record are one or more data logical records. The maximum number of data logical records for one channel of a parameter is 998. Data from each channel will be written on one or more physical records. One logical record contains two observations. However, in the case where there are an odd number of observations in a data physical record, the last data logical record in the physical record will contain only a single observation. The rest of the physical record will contain an end of data logical record and fill logical records. The formats used to store this final observation in such cases are also shown in Figure 3-5.

Table V-A(b) in Appendix A defines the format of the data logical record.

Bytes one through three (PPP) of the data logical record contain the parameter number as defined in Table XLIV in the Appendix A. The fourth through the sixth bytes (CCC) contain the channel number as shown in Table XLV and XLVI in the Appendix A.

Parameter 1 through 4 contain values from all 10 channels. CCC has one of these channel numbers. Parameter 5 contains values from 5 channels: channels 2, 3, 4, 5, and 10. For

the parameter 5 case, the fourth through the sixth bytes (CCC) are defined as in Table XLVI in the Appendix A. For example, averaged value of channel 2 of parameter 5 for latitude band 85.5 to 90.0 north has the value CCC = 001.

The seventh through the ninth bytes (DDD) contain the day number of the month. The values range from 000 to 031.

The tenth through the fourteenth bytes (VVVVV) contain the data value.

The fifteenth byte (S) contains the sign (either '+' or '-') of the scaling exponent.

The sixteenth byte (E) contains the scaling exponent. The actual value is then given by $VVVVV \cdot 10^{SE}$.

The seventeenth and eighteenth bytes (QQ) contain the quality indicator. The quality indicator codes are not defined for Nimbus-7 ERB parameters. Therefore, these bytes are filled with the EBCDIC-coded characters 00.

The nineteenth through the thirty-sixth bytes are a repeat of bytes one through eighteen for the second observation in the data logical record. If a second observation is not available, these bytes contain the EBCDIC coded characters -99-99-99-9999-9-9. The last byte in the data logical record is filled with an EBCDIC-coded blank.

3.2.3.4 End Data Logical Record

The last data logical record in the last physical record of a channel of a parameter is followed by an end data logical record. The first byte of the end data logical record

contains an EBCDIC-coded *. The remaining 36 bytes of the end data logical record contain EBCDIC-coded nines.

3.2.3.5 Fill Logical Record

The end data logical record is followed by as many fill logical records as are needed to complete the current physical record. No physical records are required if the end data logical record contains an EBCDIC coded nine.

IV. Shipping Letter Description

The shipping letter of a FGGE/ERBZ tape is the printout of the ERBZ-DP Program. There are three major parts in the shipping letter.

The first part contains information on the characteristics and the contents of the tape. The second part contains the counts of available daily records and the third part contains the counts of non-fill data and non-zero population. A sample shipping letter is included in the following pages.

I

F R B - Z - O P PROGRAM

END FILE 1 - TEST FILE 1 200 BLOCKS 0 1/0 ERRORS 0 DATA RECORDS

EGGE 48047812 7911

NAME: NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

ADDRESS: GODDARD SPACE FLIGHT CENTER (GSFC)

GREENBELT, MARYLAND 20771

UNITED STATES OF AMERICA (USA)

SCIENTIST: GARY BOLFOORD

DATE: MON APR 20 1983

0121056789: > STUVRXZ: 1-JKLMNOPQRS: TABCDEFCHI: JKC

TAPE CHARACTERISTICS: 5 TRACK, 800 BRI, CODE EBCDIC, MODE NRZI, PARITY ODD

DERIVED FROM THE ERB INSTRUMENT FLOWN ON THE NIMBUS 6 EXPERIMENTAL SATELLITE,

THIS TAPE CONFORMS WITH THE EGGE LEVEL 28 INTERNATIONAL EXCHANGE FORMAT. ALL

AVAILABLE DATA FROM 0078 12 TO 0079 11 IS SUPPLIED.

END FILE 2 - HEADER FILE 1 20 BLOCKS 0 1/0 ERRORS

ORIGINAL PAGE IS
OF POOR QUALITY

ORIGINAL PAGE IS
OF POOR QUALITY

| DAY | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MEAN IRRADIANCE FOR CH. 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MEAN IRRADIANCE FOR CH. 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEV. OF IRRADIANCE FOR CH. 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RANGE BETWEEN MAX. MIN. FOR CH. 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DELTA MEAN FOR CH. 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ZONALLY AVERAGED INSOL. FOR CH. 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

ORIGINAL PAGE IS
OF POOR QUALITY

DAY 6

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|--------------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| MEAN IRRADIANCE FOR CH. 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEAN IRRADIANCE FOR CH. 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STD. DEV. OF IRRADIANCE FOR CH. 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE BETWEEN MAX. & MIN. FOR CH. 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELTA MEAN FOR CH. 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZONALLY AVERAGED INSOL. FOR CH. 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|---------|------------|--------|------------|-----|-----|-----|-----|-----|----|
| MEAN | IRRADIANCE | FOR | CH. | 1 | FOR | CH. | 1 | | |
| MEAN | IRRADIANCE | FOR | CH. | 2 | FOR | CH. | 2 | | |
| MEAN | IRRADIANCE | FOR | CH. | 3 | FOR | CH. | 3 | | |
| MEAN | IRRADIANCE | FOR | CH. | 4 | FOR | CH. | 4 | | |
| MEAN | IRRADIANCE | FOR | CH. | 5 | FOR | CH. | 5 | | |
| MEAN | IRRADIANCE | FOR | CH. | 6 | FOR | CH. | 6 | | |
| MEAN | IRRADIANCE | FOR | CH. | 7 | FOR | CH. | 7 | | |
| MEAN | IRRADIANCE | FOR | CH. | 8 | FOR | CH. | 8 | | |
| MEAN | IRRADIANCE | FOR | CH. | 9 | FOR | CH. | 9 | | |
| MEAN | IRRADIANCE | FOR | CH. | 10 | FOR | CH. | 10 | | |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 1 | FOR | CH. | 1 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 2 | FOR | CH. | 2 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 3 | FOR | CH. | 3 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 4 | FOR | CH. | 4 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 5 | FOR | CH. | 5 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 6 | FOR | CH. | 6 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 7 | FOR | CH. | 7 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 8 | FOR | CH. | 8 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 9 | FOR | CH. | 9 |
| STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 10 | FOR | CH. | 10 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 1 | FOR | CH. | 1 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 2 | FOR | CH. | 2 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 3 | FOR | CH. | 3 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 4 | FOR | CH. | 4 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 5 | FOR | CH. | 5 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 6 | FOR | CH. | 6 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 7 | FOR | CH. | 7 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 8 | FOR | CH. | 8 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 9 | FOR | CH. | 9 |
| RANGE | BETWEEN | MAX. | MIN. | FOR | CH. | 10 | FOR | CH. | 10 |
| DELTA | MEAN | FOR | CH. | 1 | FOR | CH. | 1 | | |
| DELTA | MEAN | FOR | CH. | 2 | FOR | CH. | 2 | | |
| DELTA | MEAN | FOR | CH. | 3 | FOR | CH. | 3 | | |
| DELTA | MEAN | FOR | CH. | 4 | FOR | CH. | 4 | | |
| DELTA | MEAN | FOR | CH. | 5 | FOR | CH. | 5 | | |
| DELTA | MEAN | FOR | CH. | 6 | FOR | CH. | 6 | | |
| DELTA | MEAN | FOR | CH. | 7 | FOR | CH. | 7 | | |
| DELTA | MEAN | FOR | CH. | 8 | FOR | CH. | 8 | | |
| DELTA | MEAN | FOR | CH. | 9 | FOR | CH. | 9 | | |
| DELTA | MEAN | FOR | CH. | 10 | FOR | CH. | 10 | | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 1 | FOR | CH. | 1 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 2 | FOR | CH. | 2 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 3 | FOR | CH. | 3 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 4 | FOR | CH. | 4 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 5 | FOR | CH. | 5 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 6 | FOR | CH. | 6 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 7 | FOR | CH. | 7 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 8 | FOR | CH. | 8 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 9 | FOR | CH. | 9 | |
| ZONALLY | AVERAGED | INSOL. | FOR | CH. | 10 | FOR | CH. | 10 | |

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| DAY # | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| MEAN IRRADIANCE FOR CH. 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN IRRADIANCE FOR CH. 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. OF IRRADIANCE FOR CH. 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RANGE BETWEEN MAX-MIN. FOR CH. 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DELTA MEAN FOR CH. 1 | 0 | 0 | 0 | 0 | | | | | | | | | | | |

Appendix A

New and modified tables of Appendix A of 'FGGE DATA
MANAGEMENT PLAN'.

Appendix 10, Appendix B of "FGGE MANAGEMENT DATA"

TABLE V-A
SATELLITE SOLAR IRRADIANCE FORMAT
(a) REPORT-IDENTIFICATION

| PARAMETER | NUMBER OF CHARACTERS | POSITION NUMBER | UNITS | REMARKS |
|-------------------------------|-------------------------|--------------------|--------------------|--|
| Report-Identification Flag | 1 | 1 | | Unique character--* |
| Data-Source Index | 2 | 2-3 | | See Appendix A, TABLE I |
| Data-Processing Technique | 2 | 4-5 | | See Appendix A, TABLE XXVII |
| Not Used | 17 | 6-22 | | |
| Instrument-Type | 2 | 23-24 | | See Appendix A, TABLE II |
| Year | 2 | 25-26 | Last two digits | 78 = 1978 |
| Month | 2 | 27-28 | | 01-12 =January December |
| Not Used | 6 | 29-34 | | |
| Number of Logical Records | 3 | 35-37 | | Number of Logical Records in the Report |

TABLE V-A (continued)
(b) SOLAR IRRADIANCE DATA RECORD

| PARAMETER | NUMBER OF CHARACTERS | POSITION NUMBER | UNITS | REMARKS |
|---------------------------------|-------------------------|--------------------|---------|--|
| Parameter Number | 3 | 1-3 | | See Appendix A, TABLE XLIV |
| Channel Number | 3 | 4-6 | | See Appendix A, TABLE XLV & XLVI |
| Day | 3 | 7-9 | | 017 = 17th day of the month |
| Scaled Data Value | 5 | 10-14 | W/M^2 | |
| Sign of the Scaling Exponent | 1 | 15 | | + or - |
| Scaling Exponent | 1 | 16 | | N Real Value = (scaled value) *(10) ^{sign * N} 00 |
| Quality Indicator | 2 | 17-18 | | See Appendix A, TABLE XLIV |
| Parameter Number | 3 | 19-21 | | See Appendix A, TABLE XLV & XLVI |
| Channel Number | 3 | 22-24 | | See Appendix A, TABLE XLV & XLVI |
| Day | 3 | 25-27 | | 017 = 17th day of the month |
| Scaled Data Value | 5 | 28-32 | W/M^2 | |
| Sign of the Scaling Exponent | 1 | 33 | | + or - |

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TABLE V-A (continued)
(b) SOLAR IRRADIANCE DATA RECORD

| PARAMETER | NUMBER OF CHARACTERS | POSITION NUMBER | UNITS | REMARKS |
|-------------------|-------------------------|--------------------|-------|---|
| Scaling Exponent | 1 | 34 | | N. Real Value = (scaled value) |
| Quality Indicator | 2 | 35-36 | | $\star(10)^{\text{sign}} \star N$ 00 |
| Not Used | 1 | 37 | | |

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Appendix 10, Appendix A OF "FGGE DATA MANAGEMENT PLAN"

TABLE I

Data-source index

| <u>Code Figure</u> | <u>Description</u> |
|--------------------|---|
| 11 | Rawinsonde data |
| 12 | Pilot wind data |
| 13 | TWOS/Radar sounding data |
| 14 | TWOS NAVAID sounding data |
| 15 | Aircraft dropwindsonde data |
| 16 | Constant-level balloon data |
| 17 | Experimental satellite stratospheric sounding data |
| 21 | Aircraft data - ASDAR |
| 22 | Aircraft data - AIDS cassette |
| 23 | Aircraft data - conventional (AIREP) |
| 24 | Aircraft data - conventional (CODAR) |
| 31 | Manual surface land observation (SYNOP) |
| 32 | Automatic surface land observation (SYNOP) |
| 33 | Surface observation from fixed ship (SHIP) |
| 34 | Surface observation from mobile ship (SHIP) |
| 35 | Surface observation from environmental buoys: (not included in FGGE Special Observing System). |
| 41 | Satellite sounding data |
| 42 | Experimental satellite ozone data (total and profiles). |
| 51 | Satellite clear-radiance data |
| 52 | Nimbus-7 ERB Mean Solar Irradiance |
| 53 | Nimbus-7 ERB Standard Deviation of Solar Irradiance |
| 54 | Nimbus-7 ERB Range (Max-Min) of Solar Irradiance |
| 55 | Nimbus-7 ERB Delta Mean of Solar Irradiance |
| 56 | Nimbus-7 ERB Zonally Averaged Solar Irradiance |
| 61 | Satellite wind data |
| 62 | Satellite cloud data |
| 63 | Satellite sea-surface temperature data |
| 64 | Experimental satellite total ozone data |
| 71 | Oceanographic data (FM 63 BATHY message, IGOSS TESAC logs) |
| 73 | Oceanographic data (Fully processed X-BT data) |
| 74 | Oceanographic data (Fully processed MBT data) |
| 75 | Oceanographic data (Fully processed STD/CTD-profiling device) |
| 76 | Oceanographic data (Fully processed serial depth data) |
| 77 | Oceanographic data (Fully processed buoy data) |
| 81 | Drifting buoy data |
| 91 | Experimental satellite sea surface wind speed data |
| 92 | Experimental satellite total atmospheric water vapour data |
| 93 | Experimental satellite ocean rain rate data |
| 94 | Experimental satellite sea ice concentration data |
| 98 | Undeterminable data sources |
| 99 | This number must not be used as a data-source index. It is reserved for the end-of-file identifications. |

*The first figure in the code indicates the number of the data format (I-8). The second figure indicates the type of data.

MODIFIED

APPENDIX 10, APPENDIX A OF "FGGE DATA MANAGEMENT PLAN"

TABLE XVI

Indicator for data-processing technique used by satellite data produce
(for tropopause level SBUV total ozone and SBUV ozone profiles).

| Code Figure | Description |
|-------------|---|
| 00 | Processing technique not specified. |
| 01 | Statistical regression. |
| 02 | Total ozone - interpolation of precomputed. tables based on ratios of measured radiances. |
| 03 | Vertical ozone profiles - profile inversion using the pressure increment method. |
| 04 | Vertical ozone profiles - optimum statistical method weighted by confidence in climatological model at pressure levels and by radiance noise. |
| 05 | Average with equal weight. |

NEW
APPENDIX 10, APPENDIX A OF "FGGE DATA MANAGEMENT PLAN"

TABLE XLIV

NIMBUS-7 ERB
PARAMETER NUMBER OF SOLAR IRRADIANCE REPORTS

| CODE FIGURE | DESCRIPTION |
|-------------|--------------------------------------|
| 1 | Mean Irradiance |
| 2 | Standard Deviation of Irradiance |
| 3 | Range of Irradiance |
| 4 | Delta Mean of Irradiance |
| 5 | Zonally Averaged Solar Insolation |

NEW

APPENDIX 10, APPENDIX A OF "FGGE DATA MANAGEMENT PLAN"

TABLE XLV

NIMBUS-7 ERB

CHANNEL NUMBER OF SOLAR IRRADIANCE REPORTS

| CODE FIGURE | DESCRIPTION |
|-------------|------------------------|
| 1 | .2 - 3.8 (micrometers) |
| 2 | .2 - 3.8 |
| 3 | .2 - 50+ |
| 4 | .526 - 2.8 |
| 5 | .698 - 2.8 |
| 6 | .395 - 0.508 |
| 7 | .344 - 0.460 |
| 8 | .300 - 0.408 |
| 9 | .275 - .360 |
| 10C | .2 - 50+ |

NOTE: Used only for parameters 1 through 4 defined in TABLE XLIV.

NEW
APPENDIX 10, APPENDIX A OF "FGGE DATA MANAGEMENT PLAN"

TABLE XLVI

Nimbus-7

CHANNEL NUMBER OF SOLAR IRRADIANCE REPORTS

| LATITUDE BELT (Degrees) | <u>NORTHERN</u> | | | | | <u>SOUTHERN</u> | | | | |
|-------------------------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|
| | 2 | 3 | 4 | 5 | 10 | 2 | 3 | 4 | 5 | 10 |
| 85.5-90.0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 81.0-85.5 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 76.5-81.0 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 72.0-76.5 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 67.5-72.0 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 63.0-67.5 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 58.5-63.0 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 54.0-58.5 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 49.5-54.0 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 45.0-49.5 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 40.5-45.0 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 36.0-40.5 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 31.5-36.0 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 |
| 27.0-31.5 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 |
| 22.5-27.0 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 |
| 18.0-22.5 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 |
| 13.5-18.0 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 |
| 9.0-13.5 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 |
| 4.5- 9.0 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 |
| 0.0- 4.5 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 |

NOTE: Used only for parameter 5 defined in Table XLIV

Appendix B

Sample Run Output

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100-100000

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FOR 1578 : DE-EMER

COUNT OF NON-FILL DATA AND NON-ZERO POPULATIONS

ZONAL MEANS

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| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| DAY | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|-----|---------|------------|--------|------------|-----|-----|----|---|---|----|----|----|----|----|----|----|
| 1 | MEAN | IRRADIANCE | FOR | CH. | 1 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 2 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 3 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 4 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 5 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 6 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 7 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 8 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 9 | | | | | | | | | | | |
| 1 | MEAN | IRRADIANCE | FOR | CH. | 10 | | | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 1 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 2 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 3 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 4 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 5 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 6 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 7 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 8 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 9 | | | | | | | | | |
| 2 | STD. | DEV. | OF | IRRADIANCE | FOR | CH. | 10 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 1 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 2 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 3 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 4 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 5 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 6 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 7 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 8 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 9 | | | | | | | | | |
| 3 | RANGE | BETWEEN | MAX. | CHIN. | FOR | CH. | 10 | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 1 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 2 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 3 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 4 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 5 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 6 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 7 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 8 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 9 | | | | | | | | | | | |
| 4 | DELTA | MEAN | FOR | CH. | 10 | | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 2 | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 3 | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 4 | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 5 | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 6 | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 7 | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 8 | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 9 | | | | | | | | | | |
| 5 | ZONALLY | AVERAGED | INSOL. | FOR | CH. | 10 | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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